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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re patent application of

Docket No. P27286

Yoshiaki Umehara

Serial No.: 09/695,874

Group Art Unit: No. 3683

Filed: October 26, 2000

Examiner: Burch, Melody M.

For: **CALIPER BODY AND METHOD OF MANUFACTURING CALIPER BODY  
OF VEHICULAR DISC BRAKE**

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**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Sir:

Applicants request a pre-appeal conference, i.e., panel review, prior to filing an Appeal Brief. Applicants are filing a Notice of Appeal concurrently herewith. Applicants submit that the pre-appeal brief request is proper in as much as (i) the claims of the above-identified application were twice rejected and (ii) the rejections of record are improper and without basis. Applicants submit that there is a clear legal or factual deficiency in the rejections of record, as discussed herein.

**35 U.S.C. §103(a) Rejection of  
Claims 6-11, 13-16, 19 and 23-28**

**Examiner's Argument**

The Examiner argues at page 2 of the office action dated March 1, 2005 that JP-835530 shows:

... the caliper body comprising: a union hole shown surrounding element number 5 formed at the bottom portion of the cylinder of the caliper body capable of being used as a sprue for molding the caliper body with a base material and a cavity shown in the area of element number 4 disposed with the union hole....

Applicants' Response

1. Applicants submitted a declaration under 37 CFR §1.132, dated May 25, 2004, signed by an expert, Keisuke Ban. In the declaration and response of May 26, 2004, it was argued, successfully, that JP-835530 does not show a sprue that is used to form a union hole, after the molding process, e.g., a union hole formed from the sprue. JP-835530 also cannot be modified to show such feature.

2. In the declaration of Mr. Ban dated May 25, 2004, Mr. Ban declared:

It is my expert opinion that one of ordinary skill in the art would recognize that JP8-35530 does not show that a flange portion of the union hole is formed by processing the sprue after the casting. As JP8-35530 should be understood, it is simply impossible to use the inlet hole 5 of JP8-35530 as a sprue. In the case where the inlet hole 5 is utilized as a sprue and a molten metal is provided from the direction A..., the hole 5 would be closed. In order to prevent the hole from being closed, the molten metal must be provided from the B-direction at a place other than the hole 5. It would be impossible for the hole to be used as a sprue. (Emphasis added.)

3. Applicants submit that the declaration of Mr. Ban was not given proper deference in accordance with MPEP 716.01(c) III, *In re Beattie*, 974 F.2d 1309, 24 USPQ2d 1040 (Fed. Cir. 1992)). The Examiner does not provide any credible evidence to show that JP-835530 should or could be interpreted any differently than the interpretation provided by Mr. Ban, an expert in the field. In fact, the Examiner, in presenting this same rejection, again, merely reiterates the same arguments of March 2, 2004, despite credible evidence to the contrary. Simply, the hole 5 of JP-835530 cannot be used as a sprue and there is no credible evidence to the contrary.

Examiner's Argument

The Examiner admits that JP-835530 does not show gravity casting methods of the claimed invention; however, the Examiner argues that the Ogino reference can be used to modify JP-835530 to include gravity casting methods resulting in the claimed invention.

Applicants' Response

1. Applicants submit that the combination of JP-835530 and Ogino is flawed and that there is no motivation to make such a combination. In response to this portion of the argument, Applicants direct the panels' attention to the arguments set forth on page 10, 3<sup>rd</sup> paragraph to page 11, line 2, of the amendment filed on July 8, 2003.

2. Ogino merely shows a combination method using a high pressure and gravity casting method. Ogino never shows or suggests the use of a union hole or a sprue used for a union hole.

3. Ogino does not mention the orientation of the mold during casting and certainly does not disclose or remotely suggest a method of casting which can accomplish the end product of a sprue being used for a union hole. Thus, even if one were to combine the Ogino reference with JP8-35530, there is still no teaching of the use of a union hole formed from a sprue, nor would one look to the these references in order to orient the mold in such a manner as to result in the claimed invention.

Examiner's Argument

The Examiner argues that JP-1146718 teaches optimal value ratios to achieve little or no sink holes, and that this reference can be combined with that of JP-835530 and Ogino.

Applicants' Response

1. JP-1146718 does not even show the ratios of the claimed invention, a critical flaw in the Examiner's rejection. Applicants also direct the panel to page 11 to page 12, second full paragraph of the amendment filed on December 2, 2003.

2. Also, there would be no motivation to combine JP-1146718 with JP-835530 and Ogino to achieve the claimed invention. JP-1146718 is directed to molding of resins of plastics. JP-1146718 is not directed to die casting of metals, which was admitted by the Examiner during the June 21, 2005 interview.

3. The Examiner is misapplying 35 U.S.C. §103(a). MPEP §2141.01(a) states that to rely on a reference under 35 U.S.C. §103, it must be analogous prior art; however, JP-1146718 is directed towards injection molding techniques for resins and JP-1146718 to metal

castings. Much different considerations are taken into account using these two very different molding methods. For example, resins behave much differently than metals during molding processes. Also, in injection molding, there are many different methods used, none of which are used in metal casting, e.g., (i) high or low pressure gas assist injection molding or (iii) high or low pressure foam injection molding, all of which provide different features. As an illustration, gas assisted pressure molding results in a hollow structure, whereas, foam injection molding results in a product with small gas bubbles therein. These techniques and the end results are contrary to that of gravity casting of products, as claimed.

4. Mr. Ban rebutted the use of JP-1146718, as declared:

JP-H1-146718 would be used exclusively for resins for plastics. This would not be related to nor could it be modified for the use of casting automotive braking systems, for example. Said otherwise, this reference is directed to injection molding processes of resins, a material that would not be used for casting a caliper body of a vehicular disc brake. By way of illustration, the Abstract of JP-H1-146718 clearly teaches storing data on compression pressure and variations due to cooling temperature on a storage medium for injection compression processes for resins and plastics.

5. Despite this expert opinion of Mr. Ban, the Examiner still maintains that it would be obvious to use the ratios of JP-1146718 to achieve the claimed invention, without providing clear rebuttal evidence to Mr. Ban's declaration. Also, the declaration of Mr. Ban was not given proper deference in accordance with MPEP 716.01(c) III, *In re Beattie*, 974 F.2d 1309, 24 USPQ2d 1040 (Fed. Cir. 1992)). In fact, the Examiner already allowed this feature in the March 2, 2004 and October 19, 2004 office actions, but now reverts back to this rejection without providing any additional reasons for rejection.

6. The ratios recited by the claimed invention are not mere obvious design choices. It was with extensive experimentation, with results that were unexpected, that the inventors have concluded that such ratios are optimal for the invention. These ratios were proven, after exhaustive testing, to eliminate sink marks, as discussed on pages 20 and 21 of the disclosure.

**35 U.S.C. §103(a) Rejection of  
Claims 18 and 20-22**

Examiner's Argument

The Examiner argues that JP-835530 in view of Ogino, JP-1146718 and WIPO 98/27353 show all of the features of claims 18 and 20-22.

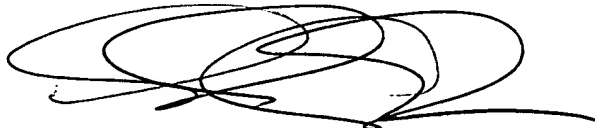
Applicants' Response

1. The WIPO reference does not show a base material injected in symmetry about the core. The WIPO reference discloses that the core is in the correct portion for casting operations, which is not the same or similar to that of the symmetrical injection about the core, as claimed.
2. The Examiner still fails to consider all of the features of claim 22.

**CONCLUSION**

The panel is requested to pass the above application to issue. If extensions of time are necessary to prevent abandonment of this application, then such extensions of time are petitioned under 37 C.F.R. §1.136(a), and any fees are authorized to be charged to Account No. 19-0089.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Andrew M. Calderon', with a stylized, looping flourish extending to the right.

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